

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A process for the production of propylene comprising contacting a mixture of hydrocarbons with a catalyst composition under cracking conditions, thereby producing a product comprising propylene from said mixture, and

wherein the mixture of hydrocarbons comprises predominately olefins, ~~and wherein~~ the mixture has a boiling point ranging from -15°C to +80°C, ~~and wherein~~ the catalyst composition comprises a large pore zeolite comprising a lattice of 12 tetrahedrons, and ~~wherein~~ the zeolite has a molar ratio of silica/alumina from 100 to 200.

Claim 2 (Previously Presented): The process according to claim 1, wherein the mixture of hydrocarbons has a boiling point ranging from -12°C to +60°C.

Claim 3 (Previously Presented): The process according to claim 1, wherein the zeolite is a ZSM-12 zeolite.

Claim 4 (Previously Presented): The process according to claim 3, wherein the ZSM-12 zeolite has a molar ratio silica/alumina ranging from 100 to 150.

Claim 5 (Previously Presented): The process according to claim 1, wherein the mixture of hydrocarbons comprises from 30% to 100% by weight of olefins.

Claim 6 (Previously Presented): The process according to claim 5, wherein the mixture of hydrocarbons has a content of 40% to 85% by weight of olefins.

Claim 7 (Previously Presented): The process according to claim 1, wherein the process is carried out at a temperature ranging from 400°C to 750°C.

Claim 8 (Previously Presented): The process according to claim 7, wherein the temperature ranges from 450°C to 700°C.

Claim 9 (Previously Presented): The process according to claim 8, wherein the temperature ranges from 500°C to 650°C.

Claim 10 (Previously Presented): The process according to claim 1, wherein the process is carried out at a weight hourly space velocity (WHSV) ranging from 0.1 h⁻¹ to 1,000 h⁻¹.

Claim 11 (Previously Presented): The process according to claim 10, wherein the weight hourly space velocity ranges from 0.5 h⁻¹ to 100 h⁻¹.

Claim 12 (Previously Presented): The process according to claim 11, wherein the weight hourly space velocity ranges from 0.8 h⁻¹ to 50 h⁻¹.

Claim 13 (Previously Presented): The process according to claim 1, wherein the zeolite has a molar ratio of silica/alumina ranging from 150 to 200.

Claim 14 (Previously Presented): The process according to claim 1, wherein the zeolite has a molar ratio of silica/alumina of 100.

Claims 15-16 (Canceled).

Claim 17 (Previously Presented): The process according to claim 1, wherein the catalyst composition maintains catalytic activity for 25 hours or more.

Claim 18 (Previously Presented): The process according to claim 1, wherein the catalyst composition maintains approximately the same level of conversion for 25 hours or more.

Claim 19 (Previously Presented): The process according to claim 1, wherein the catalyst composition maintains catalytic activity and maintains approximately the same level of conversion, both for 25 hours or more.

Claim 20 (Currently Amended): A process for the production of propylene comprising contacting a mixture of hydrocarbons with a catalyst composition under cracking conditions, thereby producing a product comprising propylene from said mixture, and

wherein the mixture of hydrocarbons comprises predominately olefins, ~~and wherein~~ the mixture has a boiling point ranging from -15°C to +80°C, ~~and wherein~~ the catalyst composition comprises a large pore zeolite comprising a lattice of 12 tetrahedrons, and ~~wherein~~ the zeolite has a molar ratio of silica/alumina less than 200; and

wherein the zeolite is prepared by the steps comprising:

contacting sodium aluminate with an aqueous solution of tetramethyammonium hydroxide to form a mixture,

contacting the mixture with colloidal silica to form a homogeneous gel,

crystallizing the gel under hydrothermal conditions to obtain a first solid,

washing the first solid with water to form a second solid,
calcining the second solid in air to form a calcined solid,
subjecting the calcined solid to an ion exchange using an aqueous solution of
ammonium acetate to form a third solid, and
calcining the third solid in air.

DISCUSSION OF THE AMENDMENT

Claim 1 has been amended by inserting back --under cracking conditions--, which was inadvertently omitted in the previous amendment to Claim 1. See original Claim 1.

Claim 1 has been further amended by positively reciting the product that is formed.

Superfluous language has been deleted. Claim 20 has been amended similarly to Claim 1.

Claims 15 and 16 have been canceled.

No new matter is believed to have been added by the above amendment. Claims 1-14 and 17-20 are now pending in the application.